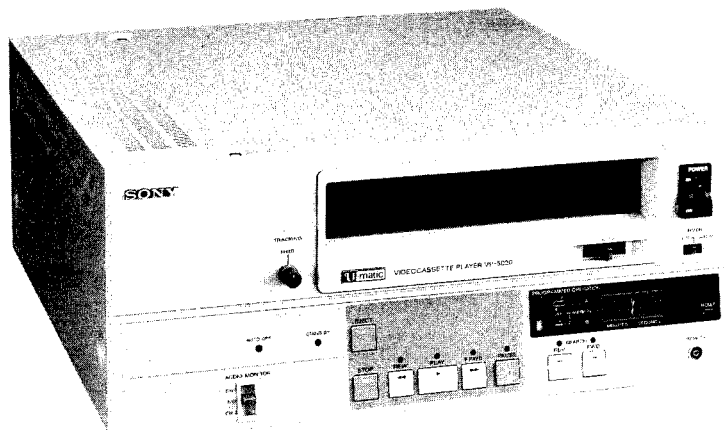
U-matic

VIDEOCASSETTE PLAYER

VP-5020



SONY®

MANUAL

SPECIFICATIONS

System

Video recording	Rotary two-head helical scan system
Luminance	FM recording
Color signal	Converted subcarrier direct recording
Video signal system	EIA standards, NTSC color

Video

Output

VIDEO OUT	BNC type x 1 1.0 V(p-p) ±0.2 V(p-p), 75 ohms, unbalanced, sync negative
TV	8 pin x 1
Horizontal resolution	240 lines
Signal-to-noise ratio	More than 45 dB

Audio

Output

LINE OUT CH-1, CH-2	Phono jack 1 in each −5 dB (47 kohm load)
AUDIO MONITOR	Minijack x 1 −5 dB (with 47 kohm load)
TV	8-pin x 1
Signal-to-noise ratio	More than 48 dB (at 3% distortion) Both channels 1 and 2
Frequency response	50 – 15,000 Hz (channels 1 and 2)

Special functions

Pause	A still picture is obtained, with automatic long pause function
Search	Possible (about 5 times of normal speed in forward and reverse direction)
Tracking control	Possible
Skew control	Possible
Dropout compensator	Internal

Tape transport

Tape speed	9.53 cm/sec (3 3/4 inches)
Playback time	60 min (with KCA-60K)
Fast forward and rewind time	within 4 min (with KCA-60K)
Wow and flutter	0.2% RMS
Tape compatibility	U-matic video cassette tape
Usable tape	KCA, KCS, KSP type tape

General

Power requirements	120 VAC ±10%, 50/60 Hz ±10%
Power consumption	53 W
Operating position	Horizontal
Storage temperature	−20°C to +60°C (−4°F to +140°F)
Operating temperature	5°C to 40°C (41°F to 104°F)
Dimensions	Approx. 424 x 193 x 489 mm (w/h/d) (16 3/4 x 7 5/8 x 19 3/4 mm) including projecting parts and controls
Weight	Approx. 16 kg (35 lb 4 oz)

Optional accessories

Color video monitor Sony CVM, PVM series
Remote control unit RM-690
Video and audio distributor DA-500
Video and audio switcher VCS-500
VTR selector RM-V5

Cleaning cassette KC-1C
Monitor connecting cable VMC-3P (3 m), VMC-5P (5 m), VMC-10P (10 m).
RF kit RFK-634
Rack mount kit RMM-507

SECTION 1
GENERAL DESCRIPTION

1-1. FEATURES

Front loading system
Almost all of the functions including the cassette insertion can be controlled on the front panel. So the unit can easily be operated, and be mounted into the rack easily, and the space for installing the unit is saved.

Search operation
Playback at about 5-times normal speed is possible in both forward and reverse directions.

LED time counter
The time counter reads the CTL signals recorded on the tape and the LEDs indicate the point on the tape in seconds and minutes.

Automatic tape transport operation
The PROGRAMMED OPERATION selector allows you to locate a particular point on the tape easily and quickly, and also to play back a portion on the tape repeatedly.

Still picture
When the tape is stopped with the PAUSE button during playback, a still picture can be obtained. The guard band noise is limited to the upper or lower part of the screen so that the still picture is easy to see.

Long pause mode
When the tape is stopped in the pause mode for a long period of time, the machine automatically enters the long pause mode to avoid possible damage to the tape.

Remote control
The machine can be remotely controlled with an optional remote control unit.

Logic control
The logic control system allows you to change modes without pressing the STOP button.

Full automatic rewind
The tape is automatically rewound to the beginning when it runs to the end.

Timer operation
With the aid of a timer (optional), playback can be started and stopped when the player is unattended.

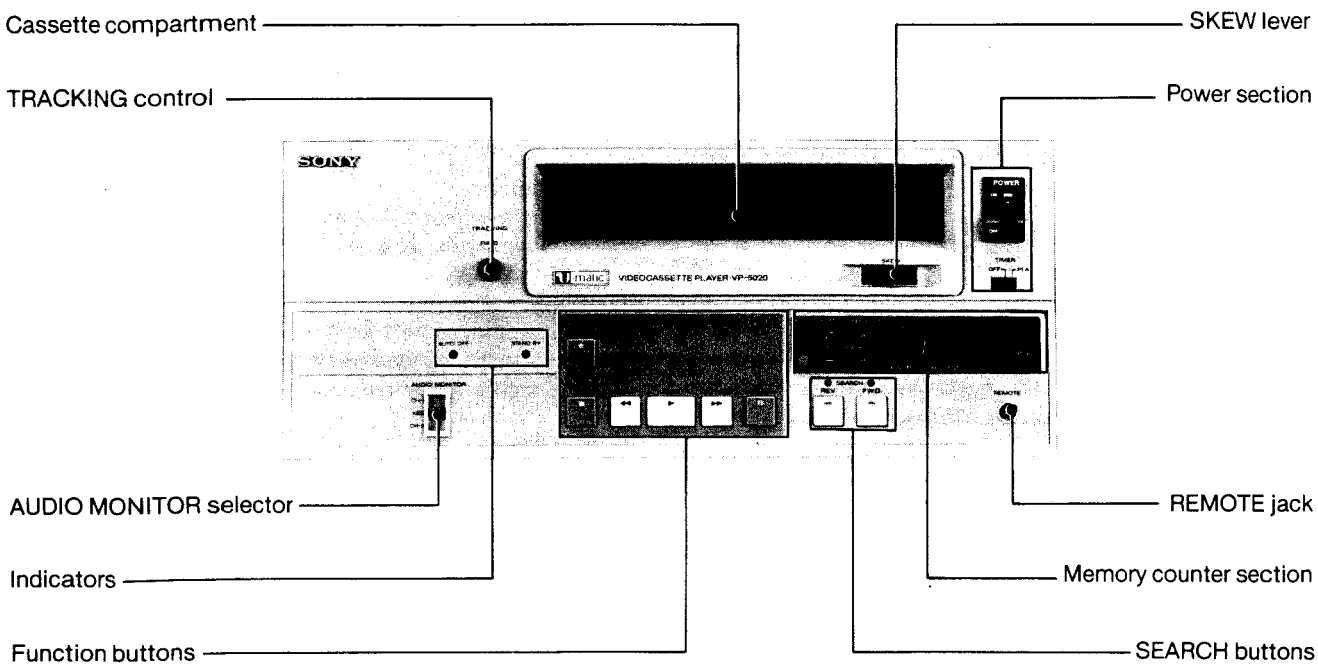
Stable playback picture
The servo system using a direct drive capstan motor and drum motor, and the digital servo IC developed by Sony assures a stable tape transport which reduces tape jitter.

Moisture detector
When moisture condenses on the video head drum, the moisture detector is activated and the machine stops to avoid possible tape damage. The AUTO OFF indicator lights to indicate moisture condensation.

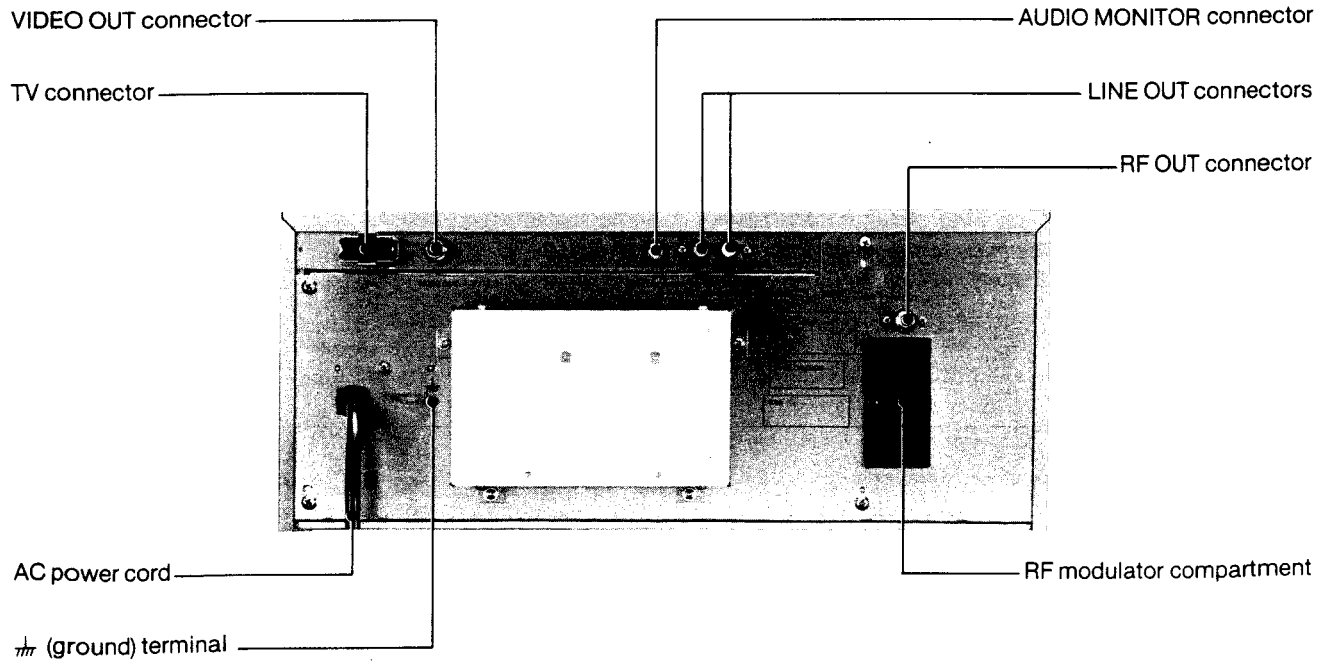
Compact and lightweight design
The machine is compact and lightweight so that it can easily be mounted into the rack and the space for setting the machine can be saved.

No power adaptation
Thanks to high efficiency switching regulator developed by Sony, the unit can be operated with a wide range of power voltages and frequencies without power adaptation.

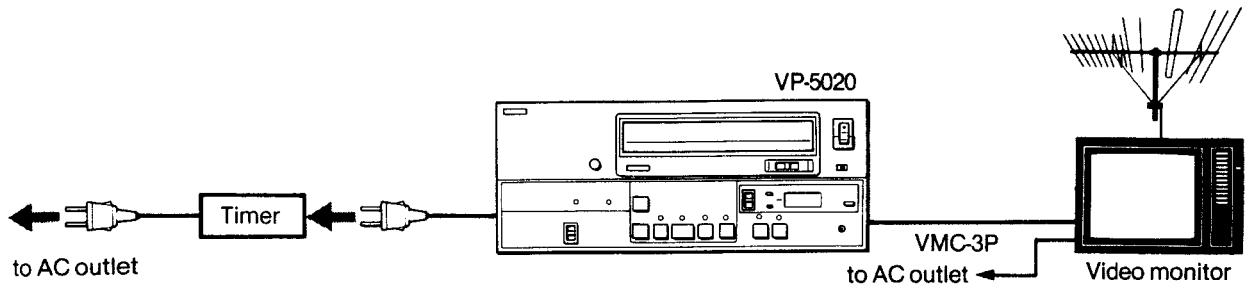
1-2. LOCATION AND FUNCTION OF PARTS AND CONTROLS



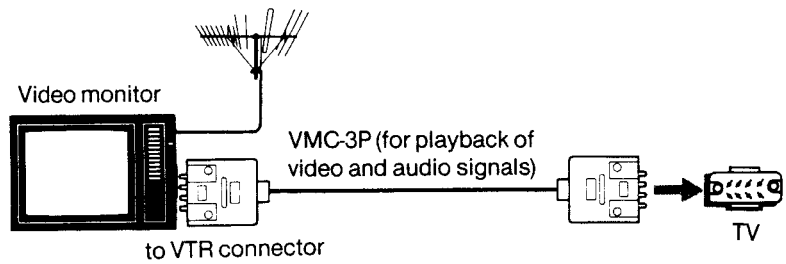
REAR PANEL



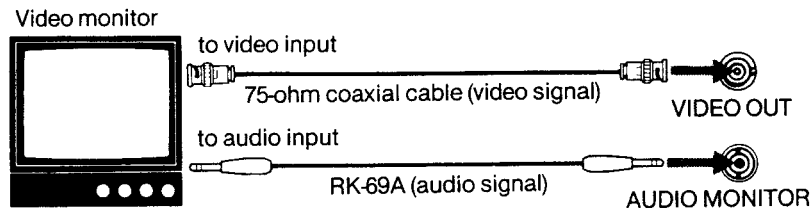
1-3. CONNECTION



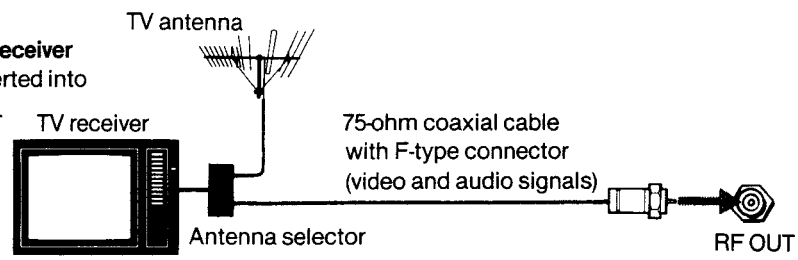
When the video monitor has an 8-pin VTR connector

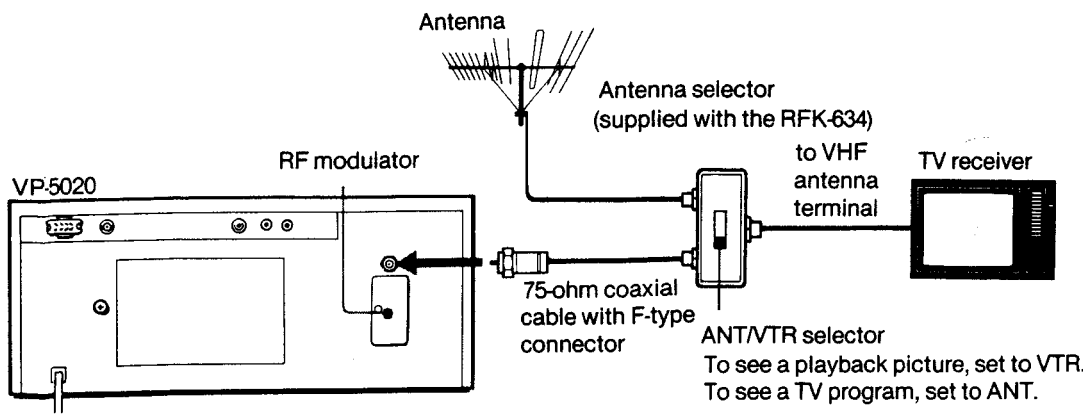


When the video monitor does not have an 8-pin VTR connector



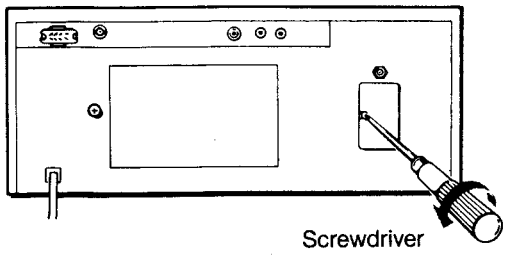
Playback on a conventional TV receiver
An RF modulator should be inserted into the RF modulator compartment.
• For details, see page 19.



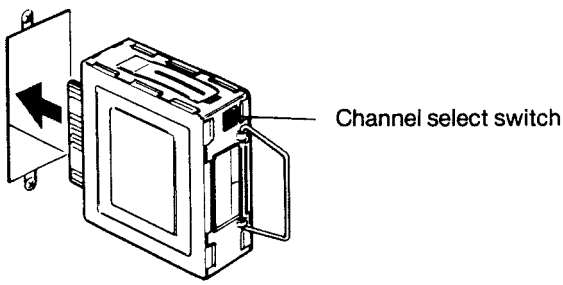

Antenna
Antenna selector (supplied with the RFK-634)
RF modulator
VP-5020
to VHF antenna terminal
TV receiver
75-ohm coaxial cable with F-type connector
ANT/VTR selector
To see a playback picture, set to VTR.
To see a TV program, set to ANT.

1-4. INSTALLATION OF AN RF MODULATOR

1 Loosen the screw on the RF modulator compartment, and remove the lid.



2 Set the channel select switch on the RF modulator to the inactive channel in your area, channel 3 or 4.



3 Install the RF modulator into the compartment aligning the direction properly.

1-5. OPERATION

Panse Mode

Press the PAUSE button. The tape stops and a still picture will appear on the monitor screen.
To resume playback, press the PAUSE button again or press the PLAY button.

The long pause mode

If the pause mode continues for about 8 minutes, the tape around the head drum automatically slackens to protect the video heads and the tape, and the still picture disappears. This is called the long pause mode.

Search Operation

The SEARCH buttons allow you to view the playback picture at about 5-times normal speed in both forward and reverse directions so that a particular point can be quickly located.

Program Operation

Using the MARK IN A and B buttons and the PROGRAMMED OPERATION selector, you can locate a particular point quickly or play a particular portion repeatedly.

- You can memorize only one point on each MARK IN A or B button. If the button is pressed several times, only the last point will be memorized.
- The PROGRAMMED OPERATION selection should be set to the OFF or ⏏ when you memorize the point on the MARK IN A or B button.
- The memory of the MARK IN A and B buttons are cancelled when the RESET button is pressed and the "00:00" will be memorized on both buttons.
- When the programmed operation is finished, be sure to set the PROGRAMMED OPERATION selector to OFF.

To Locate a Particular Point

1 Press the MARK IN A button at the desired point.
2 Set the PROGRAMMED OPERATION selector to ⏮ .
3 Run the tape in the rewind or search mode.

The tape will stop at the point where the MARK IN A button was pressed. When the tape runs in the search mode, a still picture can be seen when the tape stops.

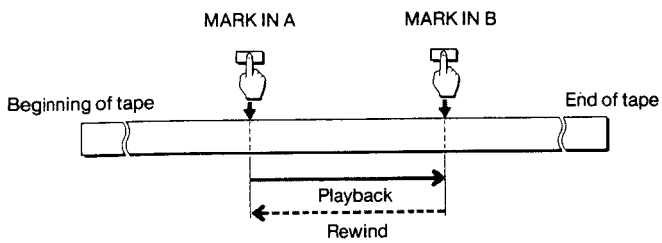
- If any point has not been memorized on the MARK IN A button, the tape stops at the point where the time counter indicates "00:00".

- When the REW button is pressed during playing the tape back, the point where the tape stops may slipped by about 3 seconds.

To Repeat a Particular Portion

1 Search for a point from where the playback is to begin, and press the MARK IN A button to memorize the point.
2 Search for a point where the playback is to stop, and press the MARK IN B button to memorize the point.
3 Set the PROGRAMMED OPERATION selector to $\overset{A}{\underset{B}{\circlearrowleft}}$.
4 Press the REW button.
The part between the points memorized on the MARK IN A and B buttons are played back repeatedly.

To stop the playback, press the STOP button.

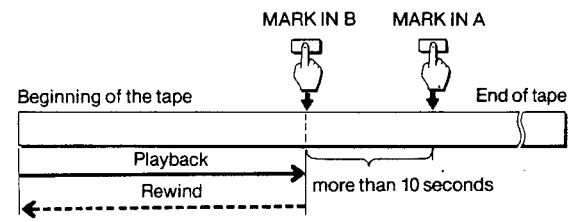


- The video signal or the CTL signal should be recorded for more than 5 second after the point which is memorized on the MARK IN B button.

To repeat between the beginning of the tape and a particular point

1 Search for a point where the playback is to stop and memorize the point on the MARK IN B button.
2 Play the tape for more than 10 seconds from the memorized point, stop the tape and press the MARK IN A button.
3 Set the PROGRAMMED OPERATION selector to $\overset{A}{\underset{B}{\circlearrowleft}}$.
4 Press the REW button.
The tape rewinds to the beginning of the tape, then the player plays back the designated portion on the tape repeatedly.

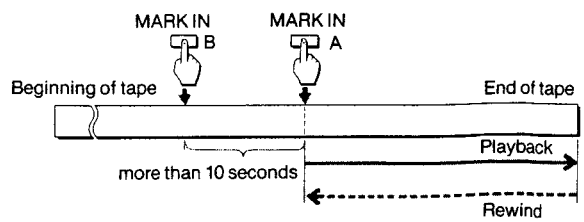
To stop the playback, press the STOP button.



To repeat between a particular point and the end of the tape

1 Search for a point from where the playback is to begin and press the MARK IN A button.
2 Rewind the tape more than 10 seconds by watching the time counter, stop the tape and press the MARK IN B button.
3 Set the PROGRAMMED OPERATION selector to $\overset{A}{\underset{B}{\circlearrowleft}}$.
4 Play the tape.
The tape is played back to the end and rewinds to the point where the MARK IN A button was pressed, and the playback of the designated portion on the tape is repeated.

To stop the playback, press the STOP button.



1-6. REMOTE CONTROL

The VP-5020 can be controlled by a remote control unit RM-690 (optional) connected to the REMOTE jack. The function of the buttons of the RM-690 is the same as that of the VP-5020.